

ABSTRACT

A vertical MOS transistor has a source region, a channel region,  
and a drain region that are vertically stacked, and a trench that extends  
5 from the top surface of the drain region through the drain region, the  
channel region, and partially into the source region. The vertical MOS  
transistor also has an insulation layer that lines the trench, and a  
conductive gate region that contacts the insulation layer to fill up the  
trench.

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